

CLAIM AMENDMENTS

Claim 1. (Cancelled)

Claims 2-18. (Cancelled)

Sub D1
C1

19. (Currently Amended) A method comprising:
providing a light modulator comprising a pixel cell and a first memory local to the pixel cell relative to other pixel cells of the modulator to store a digital indication of a predetermined voltage;
providing a capacitor to maintain a terminal voltage of the a pixel cell near the a predetermined voltage;
providing a first memory to store a first digital indication of the predetermined voltage;
~~during a frame update operation, communicating the second digital indication from the second memory to update the terminal voltage of the pixel cell; and~~
during a refresh operation, converting the first digital indication into an analog voltage to update a charge on the capacitor.

Claim 20. (Cancelled)

Sub D1
C2

21. (Currently Amended) The method of claim 19, wherein the first memory is local to the pixel cell ~~and the second memory is a global memory for multiple pixel cells.~~

22. (Previously Added) The method of claim 19, wherein the memory comprises a static random access memory.

23. (Previously Added) The method of claim 19, further comprising:
during the refresh operation, reading the digital indication from the memory.

24. (Previously Added) The method of claim 19, further comprising:
during the refresh operation, latching the digital indication.

25. (Currently Amended) The method of claim 19, further comprising:
performing a frame update operation to the pixel cell at a rate different than a rate of the
refresh operation wherein the refresh and frame update operations are associated with different
rates.

26. (Currently Amended) A method comprising:
providing a light modulator comprising an array of pixel cells and memory buffers, each
memory buffer being associated with a different one of the pixel cells and each memory buffer
being located closer to the associated pixel cell than the other pixel cells;

C2
cond.
providing capacitors, each capacitor being associated with a different one of the pixel
cells ~~cell~~ to maintain a terminal voltage of the associated pixel cell near a predetermined voltage;

providing ~~first memory buffers, each first memory buffer being associated with a~~
~~different one of the pixel cells and storing a first digital indication of the associated~~
~~predetermined voltage;~~

providing ~~a second memory separate from the first memory buffers to store second digital~~
~~indications of updated voltages for the pixel cells;~~

~~during a frame update operation, communicating the second digital indications from the~~
~~second memory to update the terminal voltages of the pixel cells; and~~

during a refresh operation, converting the first digital indications stored in the memory
buffers into analog voltages to update charges on the capacitors.

Claim 27. (Cancelled)

Sub D1
C3
28. (Currently Amended) The method of claim 26, wherein the first memory buffers
are localized to the different associated pixel cells. ~~and the second memory is a global memory~~
~~associated with the pixel cells~~

29. (Previously Added) The method of claim 26, wherein the capacitors are
associated with a row of pixels.

30. (Previously Added) The method of claim 26, wherein the memory buffers comprise a part of a static random access memory.

31. (Previously Added) The method of claim 26, further comprising: during the refresh operation, reading the digital indications from the memory buffers.

32. (Previously Added) The method of claim 26, further comprising: during the refresh operation, latching the digital indications.

Claims 33-39 (Cancelled)

40. (Currently Amended) A light modulator comprising:
an array of pixel cells;
capacitors, each capacitor being associated with a different pixel cell to maintain a terminal voltage of the associated pixel cell near a predetermined voltage;
first memory buffers being spatially distributed among the pixel cells, each first memory buffer being associated with a different one of the pixel cells and storing a first digital indication of the associated predetermined voltage;
a second memory separate from the first memory buffers to store second digital indications of updated voltages for the pixel cells;
a circuit to during a frame update operation, communicate the second digital indications from the second memory to update the terminal voltages of the pixel cells; and
digital-to-analog converters to convert the first digital indications into analog voltages to update charges on the capacitors during a refresh operation.

41. (Currently Amended) The light modulator of claim 40, wherein the refresh operation ~~operations~~ occurs at a different rate than a the frame update operation to the pixel cells.

Claim 42. (Cancelled)

Sub
D1
C5

43. (Previously Added) The light modulator of claim 40, wherein the capacitors are associated with a row of pixels.

44. (Previously Added) The light modulator of claim 40, wherein at least one of the memory buffers comprises a static random access memory.